

DHEC

Healthy People Living in Healthy Communities

2009 Report on the Health of South Carolina's People and Environment

Our vision

A shared vision guides DHEC to inform South Carolina citizens and involve them in public health and environmental issues. Our efforts frequently inspire local communities to develop individual and community health improvement strategies. Fortunately, people are broadening their perspective on health to include not only absence of disease and access to quality medical care, but also the importance of living in healthy and environmentally sound communities. Through regulatory activities, awareness campaigns and community development, DHEC helps community organizations focus on health, including prevention and wellness activities. We also promote environmentally sound practices that protect our precious ecosystems and environmental and coastal resources. Active citizens are catalysts for changes in the health status of their communities. DHEC's challenge is to find ways to link our vision and values to the values of people in local communities. When our values complement their values, we will have healthy people living in healthy communities.

Our goals

- Increase support to and involvement by communities in developing healthy and environmentally sound communities.
- Improve the quality and years of healthy life for all.
- Eliminate health disparities.
- Protect, enhance and sustain environmental and coastal resources.
- Improve organizational capacity and quality.

Our values

- Customer Service
- Excellence in Government
- Use of Applied Scientific Knowledge for Decision-making
- Local Solutions to Local Problems
- Cultural Competence
- Teamwork
- Our Employees

A Message from the Commissioner

Because we are publishing the 2009 issue of Healthy People Living in Healthy Communities later in the calendar year, we have the benefit of knowing not only how 2008 ended, but how 2009 has begun. And unfortunately for all of us, much of the news is less than positive.

It would be impossible to report on 2008 without focusing first and foremost on budgetary issues. To say that these are unprecedented times may be a bit of an overstatement; but the financial crises facing all of state government, and the nation overall, is dire.

The impacts of cuts on the Department of Health and Environmental Control are no exception. Since cuts began in the spring of 2008, and through the end of December 2008, DHEC's base state appropriations decreased from \$147,280,917 to \$142,540,737. By the end of the 2009 legislative session in May of 2009, and with the start of the new fiscal year in July, our base budget had been reduced even further to \$107,442,179. The implications to our staffing levels and services have been tremendous.

Yet even as I write this, we face the prospects of even further reductions in the current fiscal year. When will it all stop? When will we begin to recover? Obviously none of us has a crystal ball to know the answers to these and many other questions. All we can do is weather the storm to the best of our ability and with the best interest of the people of this state as our main priority.

With that in mind, it seems that the improvements you'll see on the pages of this report are all the more outstanding. Doing more with less has truly become the norm for all of us. No better example of this exists than the challenge we had to face in April of this year.

As the agency dealt with the mid-year budget cuts already mentioned, South Carolina diagnosed and confirmed our first case of Novel H1N1 influenza, also known as swine flu. To date, the number of cases continues to increase -- statewide, nationally and worldwide. What will the future course of this pandemic be and how will the state and nation respond? Only time will tell. Be we will do everything within our power to protect and educate the public on this and the many other issues we currently face.

Many of those issues are highlighted in the pages of this report and in the corresponding web pages you'll see referenced. This year's report is greatly reduced in length from previous reports due, once again, to budget reductions and conservation of our very limited resources. But the information is available in detail on the agency's Web site at: <http://www.scdhec.gov>, and I invite each of you to take some time to visit pages of interest to you.

Among the topics you'll see covered are our efforts to post advisory signs on natural water bodies; encouragement of communities to adopt smoke-free policies; obesity; shoreline change along our coast; air quality standards; hospital acquired infections; nursing home rating systems; diabetes; heart disease and stroke; cancer; infant mortality; HIV/AIDS; TB; mercury reduction strategies; and many more.

It's a sampling of all those things we monitor and work to improve on a daily basis for all of the 4 million people who call South Carolina home. And as I've said for years, we once again continue to find ourselves moving in the right direction. Progress continues to be made, in spite of the worst budget crises in recent memory, and in spite of the new challenges that come our way...each threatening to pull scarce resources away from already strained programs.

Yet if progress can be made in spite of these obstacles, I can't help but feel both encouraged and hopeful about where we are headed. Do new obstacles slow down that progress? Of course they do. But with the help of our staff, our partners, the regulated communities, policy makers and the people of this state, I believe that progress is still not only achievable, but within our reach.

A portrait of C. Earl Hunter, the S.C. DHEC Commissioner. He is a middle-aged man with short, light-colored hair, smiling at the camera. He is wearing a dark suit jacket, a white shirt, and a striped tie. The background is a solid light blue.

C. Earl Hunter

C. Earl Hunter
S.C. DHEC Commissioner

About This Book

The title of this book reflects the S.C. Department of Health and Environmental Control's long-term vision for the future of South Carolina, healthy people living in healthy communities. The long-term goals from the agency's 2005-2010 Strategic Plan are defined and addressed within each broad chapter subject. The goals reflect our role as the state's public health and environmental agency.

Many DHEC goals are based on national standards including the Healthy People 2010 Objectives, the U.S. Environmental Protection Agency's core performance measures, the National Oceanic and Atmospheric Administration's national coastal management performance measures and the Centers for Medicare and Medicaid service standards. These goals are statements of long-term changes that will move us toward our vision.

Para informacion en español, comunicarse con su departamento de salud local (vea pagina 43).

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Who We Are

The S.C. Department of Health and Environmental Control touches the life of every South Carolinian every day. Approximately 3,800 full-time employees and approximately 500 additional hourly/temporary employees provide services through state, regional and county offices.

The General Assembly created DHEC in 1973 when it reunited the State Board of Health (created in 1878) and the Pollution Control Authority. The agency's mission is to promote and protect the health of the public and the environment. DHEC is under the supervision of the Board of Health and Environmental Control, which has seven members, one from each congressional district and one at large. The governor, with the advice and consent of the state Senate, appoints its members.

In addition to offices in Columbia, DHEC operates eight regional health and environmental offices, as well as county public health departments and clinics. These locations ensure that programs and services meet the needs of local areas. Our programs and services fall under four general areas: Health Services, Health Regulations, Environmental Quality Control and Ocean and Coastal Resource Management.

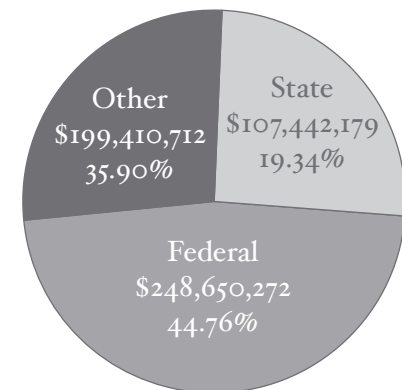
Health Services includes activities to prevent chronic and infectious diseases; promote healthy mothers, babies and families; improve and assure environmental health in areas such as restaurant sanitation, septic tanks and vector control; perform laboratory analyses for infectious diseases and newborn screening; encourage the reduction of health disparities; and support seniors with in-home health care needs.

Health Regulation oversees the development of a State Health Plan to address the need for medical facilities and services; licenses, certifies and inspects health care facilities; regulates, licenses and inspects sources of electronically-produced radiation (X-rays); and oversees entities that provide emergency medical services in the state.

Environmental Quality Control enforces federal and state environmental laws and regulations; issues permits, licenses and certifications for activities that might affect the environment; responds to complaints on environmental activities; inspects permitted entities; responds to environmental emergencies; and conducts environmental education and outreach activities.

Ocean and Coastal Resource Management enforces the S.C. Coastal Zone Management Act to protect coastal resources and promote responsible development through permitting and certification programs in the eight coastal counties.

DHEC Funding Sources Fiscal Year 2010



DHEC's budget for fiscal year 2010 (July 1, 2009 through June 30, 2010), including state, federal and other funds, is \$555,503,163.



Chapter I: Community

Increase support to and involvement by communities in developing healthy and environmentally sound communities

Attaining the vision of healthy people living in healthy communities is possible only if the community takes steps toward changing conditions for health. Public health has been vital in changing community health conditions through the years. By controlling disease outbreaks, vaccinating large populations, and overseeing safe food preparation, DHEC has carried out core public health functions. Environmental concerns also have great influence on the health of a community. Clean water to drink, safe air to breathe, and a landscape free of contamination are all necessary for good health. DHEC works with communities to show them how important and interconnected public health and environmental protection are to the overall wellness of their citizens.

Response to novel H1N1 flu (swine flu)

The novel H1N1 flu (swine flu) has continued to affect our state since late April and has been declared a worldwide pandemic.

During the first weeks of the outbreak, intense work was done in several areas of the state that included case and contact tracing, and implementation of voluntary isolation and quarantine of individuals. As of early August, nearly 500 cases had been confirmed in the state.

The novel H1N1 flu (swine flu) spreads the same way that regular seasonal flu viruses spread, mainly through the coughs and sneezes of people who are sick with the flu. It can also spread when a person touches an object or surface with flu germs on it, then touches their eyes, nose or mouth.

The best way to prevent the flu is by getting your flu shot each year. A vaccine to fight the novel H1N1 flu (swine flu) became available in October 2009.

You can also help slow the spread of flu by doing the following:

- Wash your hands. Frequent hand washing with soap and warm water helps remove germs and viruses. Wash your hands for about 20 seconds or as long as it takes to sing the “Happy Birthday” song twice.
- Cover your mouth and nose with a tissue when coughing or sneezing and then throw the tissue away. You can cough or sneeze into your upper sleeve if no tissue is handy. Wash your hands afterward.
- Eat healthy foods, exercise and get plenty of rest.
- Stay home from work if you have a fever of 100°F or higher, and a cough or sore throat for which there is no known cause. Keep your child home from school if they have the same symptoms.

<http://www.scdhec.gov/flu>



Signs posted on natural water bodies

In 2008, DHEC began posting health advisory signs on natural water bodies in the state to notify the public of two health concerns. One set of signs describes DHEC's existing advice for consuming fish that contain high levels of mercury. The second set of signs describes the agency's advice about swimming in water with high levels of bacteria. Signs are posted where they are mostly likely to be seen by people using the water for recreation.

For fish consumption advisories regarding high mercury levels, DHEC posted signs on water bodies at public boat landings. The advisories were based on data collected from DHEC's fish tissue monitoring program, and advisories issued by the U.S. Environmental Protection Agency and the U.S. Food and Drug Administration for saltwater fish. Currently, signs are posted at 50 saltwater public boat landings and 227 freshwater public boat landings.

For swimming advisories, DHEC placed signs near natural water bodies if they met the following three criteria:

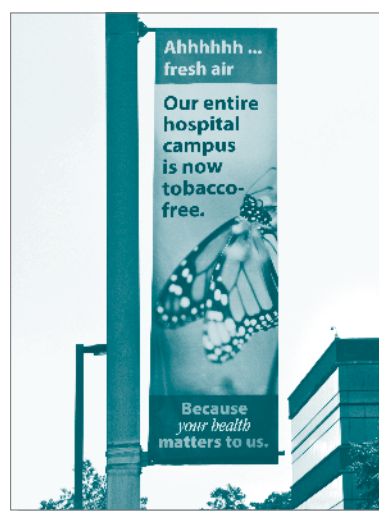
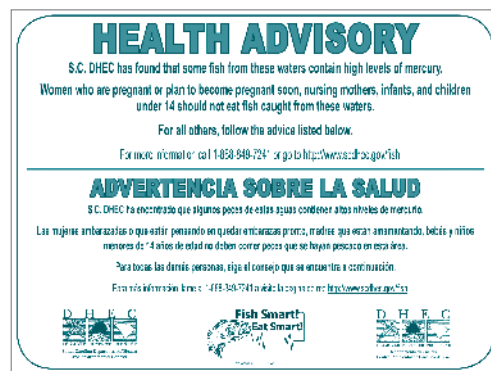
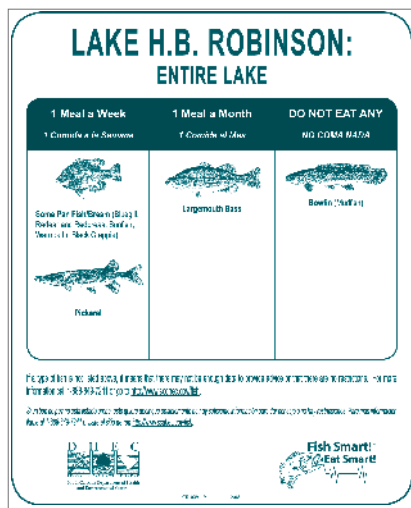
- readily accessible to the general public
- heavily used for swimming
- exceeds the fecal coliform bacteria standard for swimming

Swimmers are advised not to swim, due to the risk of swallowing the contaminated water and getting sick. Signs have been placed at 21 locations across the state that meet these three criteria.

All signs include a Web site address and toll-free telephone number for more information.

<http://www.scdhec.net/environment/water/advisories.htm>

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Smoke-free policies protect against exposure to health hazard

DHEC is working to increase the number of smoke-free indoor places throughout the state by developing model tobacco-free policies tailored to schools, hospitals, faith-based settings, worksites and recreation facilities. These policies outline how organizations can successfully go tobacco-free.

Seventy one percent of the 70 hospitals across the state have adopted tobacco-free policies to include buildings and grounds. Nineteen of the state's 85 public school districts have adopted comprehensive tobacco-free policies. Four counties and 22 cities and towns have adopted smoke-free workplace ordinances.

South Carolina was recognized as the nation's leader in passing the strongest and most local smoke-free laws in 2008. Americans for Nonsmokers' Rights, a national organization that works to pass legislation at all levels of government to protect people from secondhand smoke, named South Carolina the winner of its Smokefree Air Challenge Award.

Program helps faith community implement tobacco-free policies

Mothers Eliminating Secondhand Smoke (M.E.S.S.) — a partnership of DHEC, Hold Out the Lifeline: A Mission to Families, and various faith-based and community groups — encourages women to promote the adoption of tobacco and smoke-free policies in homes, vehicles, schools, recreational facilities and faith-based organizations.

DHEC and M.E.S.S. also developed Lighting the Path, a campaign encouraging churches to adopt tobacco-free policies, and hold educational sessions about the dangers of tobacco use. Since the program began in 2007, more than 60 churches have adopted comprehensive tobacco-free policies.

Stimulus funds for diesel emissions reduction

The U.S. Environmental Protection Agency awarded more than \$1.7 million to DHEC as part of the American Recovery and Reinvestment Act to reduce diesel emissions around the state.

DHEC is working directly with the S.C. Department of Education and the S.C. State Ports Authority to reduce diesel emissions, and assisted both agencies in securing their own federal stimulus funds through a competitive grant process with the EPA.

The Ports Authority used its stimulus funding for equipment upgrades at the port, the harbor and the highway. Projects included installing cleaner, more fuel-efficient engines in container-lifting equipment, two tugboats, a dredge and over-the-road trucks. The projects will eliminate 2,000 tons of air emissions, including:

- 1,700 tons of nitrogen oxide (NOx)
- 200 tons of carbon monoxide (CO)
- 80 tons of particulate matter (PM)
- 40 tons of hydrocarbons (HC)

The project is part of the Ports Authority's voluntary partnership with DHEC, which provided data from a baseline air emissions inventory indicating the majority of port-related air emissions were from mobile sources.

The S.C. Department of Education will use a portion of its stimulus funding to replace four 65-passenger school buses with four hybrid electric buses. It will also retrofit crankcase ventilation filtration systems on 500 of its 1995 model buses. DHEC will work with education officials to decide where to locate the new hybrid and the retrofitted buses, based on environmental and air quality conditions in the state. The upgrades will result in an estimated 4.7-ton reduction in diesel emissions.

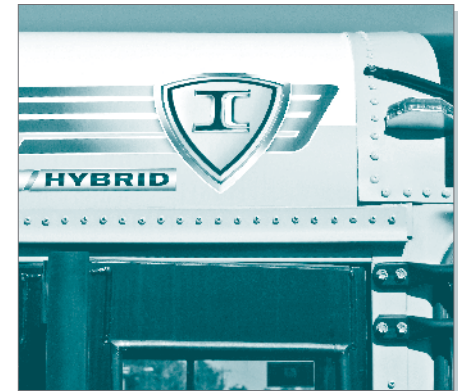
The new grant will also support activities developed by DHEC's B² or Breathe Better Program. B² will oversee bus driver trainings on ways to eliminate unnecessary diesel idling, and the formation of school clubs where children will monitor parent driver car idling in school parking lots.

In addition to helping create and retain jobs, these clean diesel projects will reduce asthma attacks, other respiratory ailments, lost workdays and premature deaths.

<http://www.scdhec.gov/DERA>

<http://www.epa.gov/recovery>

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Abandoned vessel removal program gains new partners

DHEC continues its successful program aimed at removing derelict and abandoned vessels that threaten coastal waterways. By forging partnerships with municipalities, DHEC has raised greater awareness of the challenge, and leveraged local support for the removal of priority debris items. Since 2004, more than 65 vessels and large debris items have been removed from coastal creeks and rivers. In 2009, partnerships for additional removal operations were established with the Town of Mt. Pleasant, and the cities of Georgetown and Folly Beach. Although much work remains to be done, these removal projects have been invaluable to our efforts to protect and restore the safety, health and beauty of our coastal waterways and marshes.

http://www.scdhec.gov/environment/ocrm/outreach/vessel_removal.htm

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DHEC team addressing issues through coordinated response

Complex issues affecting our environment can also affect our health. These issues can grow into situations that require significant response from various public health and environmental offices housed within DHEC.

A group of agency staff participated in a team-based training institute during 2008 to plan the formation and function of a cross-disciplinary response team. This team is now known as the HELP team, Health and Environment Linking People, a group of knowledgeable DHEC managers from various parts of the agency.

HELP uses a structured process that seeks review and input from appropriate program areas. Once input is received, the team develops a plan of action tailored to provide the best response at the right time.

The HELP team also:

- Provides a series of questions, or “triggers,” to help program



managers decide whether the HELP team should be notified, or if assistance should be sought

- Provides a means for prompt contact and communication with DHEC decision-makers
- Evaluates the request, determines the expertise and resources needed, advises the program area, and mobilizes these experts and resources to coordinate the necessary actions
- Prepares an after-action review to analyze the steps taken and how the response can be improved

Calling upon the agency's breadth of knowledge and experience, the HELP team can steer DHEC toward a more efficient and proactive response. The ultimate intent is to help DHEC better serve the public, protect the health of the people and the environment, and build stronger ties to the community.

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Obesity major contributor to poor health in S.C.

South Carolina's obesity rates have more than doubled since 1990. In 2007, South Carolina had the ninth worst overweight or obesity rate in the nation, with more than 65 percent of adults either overweight or obese.

During the past year, DHEC, through its many partners, has supported initiatives that promote healthy eating and active living including its continued strong support and collaboration with Eat Smart Move More South Carolina (ESMMSC). Some of the projects include:

Complete streets

DHEC is working with ESMMSC, DHEC's Healthy Communities consultant, and the Palmetto Cycling Coalition to improve safe transportation options for those who wish to travel using a mode other than an automobile. A "Complete street" is designed and engineered to enable safe access for all users. Pedestrians, bicyclists, motorists, and bus riders of all ages and abilities are able to safely move along and across a complete street.

School gardens

Through a collaborative effort with the S.C. Department of Agriculture and ESMMSC, DHEC is supporting a pilot project to promote a sustainable school gardening program that not only involves the students, but also incorporates the local community.

School-based obesity surveillance project

Eat Smart Move More of the Low Country conducted body mass indexes among third, fifth and eighth-graders in Beaufort and Jasper County schools to identify the percentage of overweight or obese students. Findings showed that in Beaufort County 37 percent of third-graders, 40 percent of fifth-graders and 39 percent of eighth-graders were obese or overweight. In Jasper County, 48 percent of third-graders, 52 percent of fifth-graders and 37 percent of eighth-graders were obese or overweight.

A wellness conference was held in 2009 to report these findings, and to provide education and training to community leaders and local school wellness champions who will provide healthy eating and fitness information to students and their families. More than 180 people attended the event.

In addition to the conference, 10 Head Start Centers, which have a combined enrollment of 420 students, were trained in 2009 on two wellness curricula, Color Me Healthy, and Families Eat Smart Move More. Both curricula include a classroom and family/home component so parents and guardians can learn how to incorporate healthy eating and physical activity into their daily routine.

<http://eatsmartmovemoresc.org/options-for-action/>

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Community committee addressing S.C. shoreline change

The sea level around Charleston has risen more than a foot during the last century. In addition to sea-level rise, South Carolina's coastal communities are vulnerable to chronic and episodic erosion, and the annual threat of hurricanes. These factors make the coast as dynamic as it is beautiful. To better understand and prepare for these challenges, DHEC established a multi-year Shoreline Change Initiative in 2007 to foster collaboration among coastal researchers, managers, local governments and other stakeholders.

As an integral part of this initiative, DHEC established a 23-member external Shoreline Change Advisory Committee comprised of a broad cross-section of stakeholders including scientists, coastal managers, municipal officials, developers, conservationists and legal professionals. The committee's purpose is to organize existing shoreline research, identify research priority needs and consider policy-related issues concerning management of South Carolina's estuarine and beachfront shorelines. The committee has convened monthly and has held discussion forums with community leaders throughout the region to identify and explore new approaches for coastal regulators, planners, local governments and the public to prepare for and adapt to shoreline change. The committee is expected to release a final report of its findings in late 2009.

http://www.scdhec.gov/environment/ocrm/science/shoreline_comm.htm

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Work group focusing on ocean research, education

In 2008, DHEC launched a new planning effort to consider emerging research and planning issues related to ocean resources in South Carolina. An Ocean Planning Work Group was formed, with representatives from federal and state agencies, and academic institutions. It will meet with experts and stakeholders on various issues over the next two years. Focus areas will include ocean energy exploration, offshore aquaculture, sand resources, and seafloor mapping. The goals of this initiative are to facilitate information exchange among state and federal agencies, and to develop a report to help guide future ocean research, education and policy development.

http://www.scdhec.gov/environment/ocrm/science/ocean_plan.htm

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Best Chance Network expands to address breast and cervical cancer

To address breast and cervical cancer in high-risk populations, DHEC coordinates the Best Chance Network (BCN). BCN is funded through the national Centers for Disease Control and Prevention. Screening and diagnostic services are offered throughout the state by a network of more than 250 health care providers. The American Cancer Society participates as a partner in the program by providing outreach services to recruit eligible women into screening, and to provide training and consultation to screening providers.

In South Carolina, the program pays for breast and cervical cancer screening for women ages 47-64 who are uninsured and have family incomes at or below 200 percent of the federal poverty level. During the program year ending June 30, 2008, BCN provided screening and follow-up for more than 9,000 South Carolina women. African-American women accounted for 60 percent of the women screened.

In July 2008, BCN received \$2 million in state funding to expand breast and cervical cancer to include women ages 40-46. As of April 2009, BCN has pre-authorized more than 13,200 women for screenings this year.



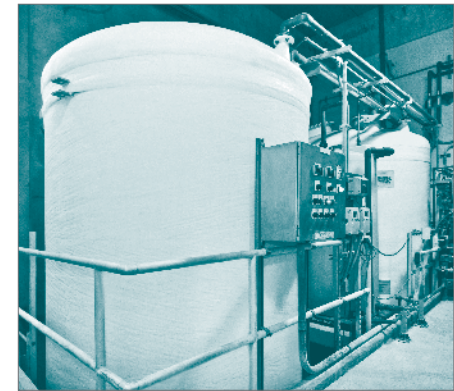
Connecting health and the environment

The internal partnership between DHEC's Division of Oral Health and its Bureau of Water is an excellent example of how an environmental program can positively address a health issue. Community water fluoridation is a safe and effective way to prevent tooth decay. Fluoride can easily be added to public water supplies. It keeps tooth enamel strong and prevents tooth decay and the serious problems that occur with dental infections.

This unique partnership has expanded to beyond the agency to include activities directed toward the water systems including: fluoridation training and educational materials for water system operators and a mini-grant program to local water systems to replace or repair fluoridation equipment. Ten South Carolina community water systems have received funding through the fluoridation equipment mini-grant program.

<http://www.scdhec.gov/health/mcb/oral/index.htm>

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Working to prevent hospital-acquired infections

Health care associated infections are infections that patients get while receiving medical treatment in hospitals, nursing homes, outpatient surgery centers and dialysis clinics. Health care-associated infections are a major public health problem. The national Centers for Disease Control and Prevention estimates that two million health care-associated infections occur in U.S. medical facilities each year. These infections result in as many as 99,000 deaths and more than \$20 billion in additional health care costs annually.

In 2006, the S.C. General Assembly passed the Hospital Infections Disclosure Act (HIDA). This law requires South Carolina hospitals to report complete and accurate hospital acquired infection (HAI) rates to DHEC every six months. DHEC then makes HAI rates publicly available for selected surgical procedures and infections. Methicillin-resistant *Staphylococcus aureus* (MRSA) bloodstream infections are also reportable by clinical laboratories. South Carolina is among the first states to report HAIs to the public.

In 2008, the following achievements and activities were accomplished:

- Posted a pair of six-month preliminary data reports the on public Web site
- Validated data, reviewed reporting processes, and checked data reports for accuracy in 65 hospitals
- Developed the first HIDA report to compare hospitals (publicly reported February 2009)

<http://www.scdhec.gov/health/disease/hai/>

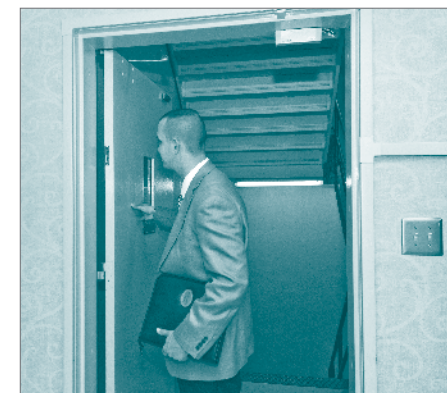
Fire and life safety in health care facilities

Reducing the number of tragic deaths associated with fires is a goal shared and supported by every S.C. citizen, yet in the first 71 days of 2009 there were 30 fire deaths. Preventing this occurrence creates a safer environment and saves millions of dollars that is often associated with property loss.

Issues related to fire and life safety are particularly challenging in health care settings that often involve people that are unable to evacuate without assistance. Six DHEC staff members are state-certified fire marshals. They ensure that all licensed health care facilities are in compliance with state fire and building codes. In addition to state codes and regulations, two of these fire marshals ensure compliance with federal fire and life safety regulations.

The primary emphasis of the program is to ensure the safest possible environment for patients and residents through routine inspections, follow-up inspections, investigations and reviews of building design and modifications. Inspection items include door operations, chemical labeling, personal safety and equipment accessibility. DHEC also conducts investigations for fires, life safety accidents, or other significant safety incidents at licensed facilities. If inspections or investigations identify potential or actual fire and life safety threats, immediate actions are taken to correct the hazardous conditions.

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Nursing home rating system

Ensuring appropriate care for the elderly and vulnerable residents living in S.C. nursing homes poses several unique challenges for DHEC. In addition to providing state regulatory oversight, DHEC is also responsible for ensuring compliance with federal standards. DHEC licenses 194 nursing homes with a resident population of 19,800. Not only is the population of the elderly and vulnerable growing, consumer expectations and demands are expanding and changing. In recent years there has been a substantial increase in the demands of residents and their families seeking information regarding the outcome of regulatory inspections and the regulatory compliance history of nursing homes.

To address the information request of residents and their families, the Centers for Medicare and Medicaid Services (CMS), which has federal oversight for Medicare and Medicaid reimbursements, created a Five Star Quality Rating System. The system was created to help consumers, their families and caregivers compare nursing homes more easily, and to help identify areas of individual concern for which they might have questions. The Nursing Home Compare Web site now features this quality rating report.

DHEC collects and provides the data that is used for the rating system. Information from the inspections of each nursing home and complaint investigations for the last three years is one component of this rating system. Staffing information provided by nursing homes and collected during the inspection process contributes to the staffing ratings. This innovative rating system, in conjunction with DHEC regulatory oversight will continue to improve and enhance the quality of life safety, and health of those living in nursing homes.

http://www.cms.hhs.gov/CertificationandCompliance/13_FSQRS.asp#TopOfPage

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Working with farmers to reduce antibiotic resistance

Through grant funding provided by the national Centers for Disease Control and Prevention known as the “Get Smart: Know When Antibiotics Work on the Farm” program, DHEC has worked with numerous partners to increase dairy farmers’ awareness of the appropriate use of antibiotics within their dairy herds. The long-term goal of the program is to decrease the transfer of antimicrobial resistance to humans and preserve antibiotic effectiveness in the management of diseases among animals and humans.

An initial pilot test revealed that 86 percent of the dairy farmers were not concerned that overuse of antibiotics could lead to antibiotic resistance. Thirty-two percent of the responding farmers had any written protocols for proper antibiotic use.

DHEC developed an educational DVD and associated materials in partnership with Clemson University’s Livestock Poultry Health. These resources were given to dairy farmers and practicing dairy veterinarians across the state during a series of meetings and personal farm visits. Collection of survey data to assess changes in knowledge and antibiotic use practices among dairy farmers who received the educational materials is ongoing.

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Beachfront management planning a local, comprehensive effort

The State Beachfront Management Act requires all counties and municipalities with ocean beaches to prepare a local comprehensive beach management plan in coordination with DHEC. The local beach management plans provide significant benefits, and increase understanding of beach management issues and procedures for local and state government agencies. These plans are updated every 10 years and help local governments comprehensively plan for short and long-term management of their beaches.

Local beach management plans include analysis and discussion of topics including public beach access, beach erosion, hazard mitigation, beach nourishment and erosion control, and shoreline retreat strategies. DHEC has increased its capacity to aid local

governments in the development of these plans. The agency has also prepared guidance to streamline the development, review and approval process. The local comprehensive beach management plans represent a significant way for local and state government to maintain a coordinated management approach for South Carolina’s ocean beaches.

http://www.scdhec.gov/environment/ocrm/plan_tech/beach_plans.htm

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Emergency Medical Technician training

When urgent medical emergencies occur, we all know that dialing 9-1-1 will bring immediate medical help. We depend on this service as a way of life. We give little thought to what it takes to maintain this reliable emergency system.

One of the many components of this system involves ensuring that the emergency medical technicians (EMTs) in South Carolina have the knowledge, skills and equipment necessary to respond to a variety of emergencies. Providing more than a taxi ride to the hospital, EMTs are able to perform life-saving procedures while transporting their patient. They can shock the heart with electricity to make it beat, insert a breathing tube, or give various medications depending on the situation.

There are three levels of EMTs in South Carolina, EMT-Basic, EMT-Intermediate and Paramedic. DHEC is responsible for determining the educational and training standards for the three levels of EMTs. DHEC also establishes the standards for medications used in the field and provides approval and oversight for each EMT training institution in South Carolina. All EMTs and paramedics must have a valid certification issued by DHEC. Certification is valid for three years, during which EMTs must obtain at least 48 hours of continuing education and have their skills verified by an EMS agency.

The availability of emergency medicine is critical to the well-being of every citizen in this state. The training and certification requirements of DHEC ensure that quality emergency medical care is provided when the citizens of this state need it most.

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STAY RIGHT, PASS LEFT
SHARE THE TRAIL!



Chapter 2: Health

Improve the quality and years of healthy life for all and eliminate health disparities

South Carolina's public health system is made up of a variety of partners and stakeholders. When all public and private health care providers, voluntary entities, associations and organizations join together, it benefits the entire system. This approach brings collective wisdom, assets and resources together to address public health and environmental issues that help shape the quality and years of healthy life for all.

To improve the overall health of the state, a concerted effort to address the racial and ethnic disparities in health outcomes is also critical. DHEC remains committed to working collaboratively with others on initiatives to address this issue.

Promoting healthy lifestyles

Tobacco use and obesity continue to be major contributors to poor health in South Carolina. During the past year, DHEC, through its many partners, has supported initiatives that will reduce the burden of tobacco use and promote healthy eating and active living.

Tobacco largest cause of preventable death

Tobacco use is the leading preventable cause of death and disease in South Carolina. It causes heart disease, lung cancer and other respiratory illnesses, and complicates chronic diseases.

The prevalence of smoking among South Carolina adults 18 and older has steadily declined 18 percent over the past five years from 26.6 in 2002, to 21.8 percent in 2007. South Carolina's rate is still higher than the national average of 19.8 percent and above the Healthy People 2010 objective of 12 percent. The cost to our state due to smoking has escalated to more than \$1 billion per year in direct health care expenses, and another \$1.94 billion in lost productivity.

To alleviate this health and economic burden, DHEC works to help South Carolinians quit using tobacco, promotes policies that protect residents from exposure to secondhand smoke, implements programs to prevent youth from starting tobacco use and addresses health disparities.



Project designed to help health clinic clients quit tobacco use

In 2008, the agency began a pilot project in seven DHEC county public health clinics to help clients receive the most effective treatment in quitting tobacco use. Through a grant from the Robert Wood Johnson Foundation, DHEC formed the Tobacco Cessation Collaborative in partnership with the Center for Health Services Policy and Research at the University of South Carolina.

The collaborative's mission is to implement proven effective methods in DHEC public health clinics to help tobacco users successfully quit and stay tobacco-free for the long term. Health clinic staff are being trained on the “2 As +R” protocol, which outlines that health care providers ask patients about tobacco use, advise them to quit and refer them to cessation resources. DHEC providers are referring clients to the S.C. Tobacco Quitline, which offers comprehensive tobacco treatment services free of charge to all South Carolinians. This process has been scientifically proven effective and is recommended by the U.S. Public Health Service Clinical Practice Guidelines Treating Tobacco Use and Dependence. The collaborative is using a quality improvement process based on the Institute for Health care Improvement Breakthrough Series. This methodology has rarely been used in governmental health departments, and the potential for this process to significantly improve how health departments function is great.

For more information on the S.C. Tobacco Quitline and other cessation resources, visit:
<http://www.scdhec.gov/quitforkeeps>.



Quitline service addresses health disparities

In South Carolina, smoking rates are linked to education and household income levels. In 2007, 33.8 percent of adults with less than a high school education were current smokers, 29 percent of adults who had completed high school were smokers while only 10.7 percent of college graduates were smokers.

The same pattern can be found when looking at household income and smoking rates. In 2007, 31.3 percent of people with a household income of less than \$15,000 were smokers while 15 percent of people with household incomes greater than \$50,000 were smokers.

To address these health disparities, DHEC teamed up with the S.C. Department of Health and Human Services to offer an increased level of cessation services to people who receive Medicaid. This intervention included offering a five-call cessation counseling program through the S.C. Tobacco Quitline. This free service was promoted in partnership with DHHS through its Medicaid bulletin. According to the S.C. Tobacco Quitline's Year One Evaluation Report, 34 percent of Medicaid respondents reported being tobacco-free seven days after completing the multi-call counseling program.

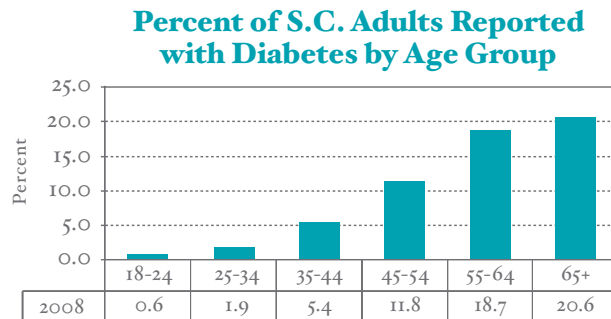
Fighting chronic diseases

Chronic diseases are the most prevalent and costly health care problems in South Carolina. Many chronic diseases are lifelong conditions, and their impact lessens the quality of life not only of those suffering from the diseases, but also of their family members, caregivers and others. DHEC partners with many community organizations, agencies and health care providers to prevent and reduce this burden.

Diabetes still a challenge in S.C.

Diabetes continues to cause significant death and disability to many South Carolinians. An estimated 300,000 – 350,000 people in the state have diabetes. More than 300,000 people have diabetes that is not diagnosed. South Carolina ranks 10th nationally in diabetes prevalence, and it is the seventh leading cause of death in the state. Approximately 1 in 8 African-Americans in South Carolina have diabetes – the 16th highest rate of diabetes among African-Americans in the nation. The prevalence of diabetes in the state increases with age – a dramatic increase can be seen among those 45 and older.

Uncontrolled diabetes can lead to many complications, including blindness, heart attacks, strokes, and amputations. Diabetes is the most common cause of kidney failure.



Data Source: S.C. BRFSS (2008)

Diabetes hospital costs in South Carolina have increased by 50 percent in the past five years. In 2006, the total amount for hospital charges related to diabetes diagnosis in the state was \$199.5 million.



Preventing and controlling diabetes

Diabetes complications can be prevented or delayed through control and management of the disease. As devastating as this disease is, there has been a decreasing trend in lower extremity amputations in people with diabetes during the past five years. In addition, South Carolina has surpassed the Healthy People 2010 objective of 50 percent of people with diabetes receiving at least one A1c test per year, the gold standard measurement of a person's average blood glucose level over the most recent three months. The suggested target for a person with diabetes is below 7. In South Carolina, 71 percent of blacks and 72 percent of whites with diabetes have reported having an A1c test at least twice a year.

Other initiatives to reduce the burden of diabetes include community and professional educational programs, such as:

- The **12th Annual African-American Conference on Diabetes** in November 2008 with 815 attendees. This conference educates the community on pre-diabetes, diabetes prevention and control, as well as other chronic diseases and conditions.
- The **Diabetes 101 curriculum** is a 90-minute community awareness presentation that focuses on increasing the awareness of the risks of diabetes and the importance of self-care when someone has diabetes. DHEC's goal is to have a minimum of two lay educators per county who are trained presenters for the curriculum. There are 157 trained facilitators in 32 of the 46 counties.
- The **DHEC Diabetes Connect program** targets rural primary care physician offices to improve the delivery of care and testing for people with obesity, cardiometabolic risk factors and diabetes. This connection provides education for the office staff to enhance their knowledge, skills and systems to improve the quality of care for their patients. In 2008, this program reached more than 120 physicians.
- **Community Health Center Technical Assistance:** DHEC partners with 15 of the 19 South Carolina's Community Health Centers to provide technical assistance to enhance diabetes outcomes and overall program success. Clinical outcomes monitored include A1c, eye exams, foot exams, flu shots, pneumonia shots, and diabetes self-management education.

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Heart disease and stroke

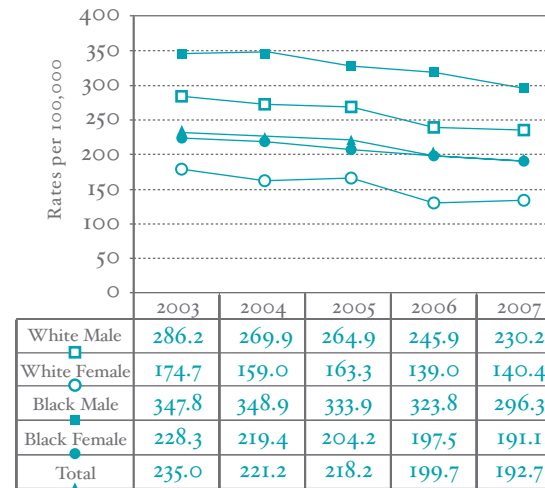
According to the American Heart Association, one out of every three American adults has some form of cardiovascular disease (CVD). In 2006, South Carolina had the 17th highest death rate for CVD in the nation. In 2007, heart disease and stroke combined remained the leading cause of death in South Carolina, accounting for 29 percent of all deaths and more than 83,000 hospitalizations. The death rate for diseases of the heart for South Carolina's African-Americans in 2007 was 236.5 per 100,000, compared to 180.3 for whites, a difference of 31 percent.

In 2006 South Carolina had the eighth highest stroke death rate and African-Americans in South Carolina had 17 percent higher stroke death rate than the national African-American rate. In 2007, the death rate in South Carolina for African-Americans was 65 percent higher than for whites.

Disparities in stroke rates

Health disparities also exist for poor, rural, and uninsured persons within the state. DHEC works with partners across the state to address and identify opportunities to reduce these disparities. During 2008 DHEC held the Third Annual Capacity Building Institute, themed Empowerment: Training Faith-Based Organizations to Implement Best Practice Health Models. Representatives from 17 churches attended the institute and were trained on how to provide training in their churches on best practice models such as Color Me Healthy, Search Your Heart, Body and Soul and Walking to Jerusalem. To date, 15 of the partner churches are implementing these best practice models.

S.C. Heart Disease Death Rates*

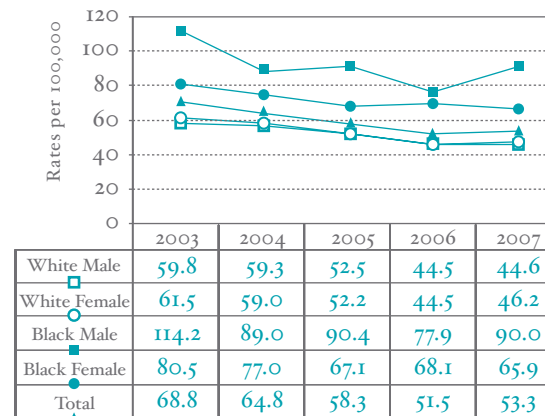


Data Source: S.C. DHEC Biostatistics

*Age-adjusted to the 2000 U.S. standard population

*Mortality rates calculated per 100,000

S.C. Stroke Death Rates*



Data Source: S.C. DHEC Biostatistics

*Age-adjusted to the 2000 U.S. standard population

*Mortality rates calculated per 100,000

Cancer prevention and control

Burden of Disease

Cancer continues to be a serious problem in South Carolina. On some of the most preventable cancers, which include breast, cervical and colorectal, South Carolinians face greater disease burden than most people in other states.

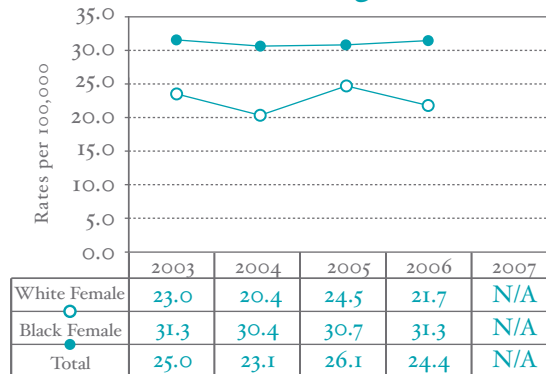
To address these most common preventable cancers, DHEC uses a variety of approaches, including prevention, early detection, patient and professional education, partnership building, and policy change to reach the general public and high-risk populations.

Breast Cancer

According to 2006 South Carolina data, breast cancer is the most commonly diagnosed cancer among women. The risk for breast cancer increases with age. It is the second leading cause of cancer death among women in South Carolina and third largest cause overall. White women are more likely to be diagnosed with breast cancer than African-American women, but African-American women are more likely to die from breast cancer. According to the National Cancer Institute, if diagnosed early, the five-year survival rate is more than 98 percent.

According to the 2005 Surveillance, Epidemiology, and End Results (SEER) mortality data, South Carolina ranks ninth out of

**Breast Cancer Death Rates*
All Ages**



Data Source: S.C. DHEC PHSIS-SCCCR
Cause of death classification based on ICD-10
*Age-adjusted to the 2000 U.S. standard population
2007 data not available

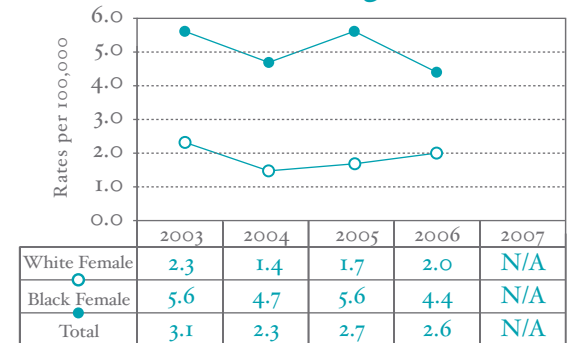
the 50 states and Washington D.C. in breast cancer mortality. Overall mortality from breast cancer in South Carolina is slightly greater than the national average. Overall, the age-adjusted breast cancer mortality rate in South Carolina in 2006 was 21.7/100,000 compared to the Healthy People 2010 goal of 24.4/100,000 women; however, the rate among African-American women is alarmingly high in South Carolina at 31.3/100,000.

Cervical Cancer

According to the SEER 2005 mortality data, South Carolina ranks 15th in the nation in cervical cancer mortality. Using 2006 South Carolina data, cervical cancer is the sixth most commonly diagnosed cancer among African-American women and the 14th most commonly diagnosed cancer among white women, excluding miscellaneous cancers. While the overall trend for cervical cancer mortality is decreasing, it is two times higher in African-American women than in white women. If caught early, the five-year survival rate is more than 90 percent.

The overall mortality rate of cervical cancer in South Carolina is slightly more than the U.S. average. South Carolina has not met the Healthy People 2010 objective of reducing mortality rate from cervical cancer to 2.0/100,000. In 2006, the overall age-adjusted mortality rate from cervical cancer in South Carolina was 2.6/100,000.

**Cervical Cancer Death Rates*
All Ages**



Data Source: S.C. DHEC PHSIS-SCCCR
Cause of death classification based on ICD-10
Rates calculated using small numbers are unreliable and should be used cautiously
*Age-adjusted to the 2000 U.S. standard population
2007 data not available

WISEWOMEN launched

In July 2008, DHEC received funding from the CDC to develop and implement the WISEWOMAN program. WISEWOMAN (Well Integrated Screening for Women Across the Nation) adds cardiovascular screening and lifestyle intervention services to women at the time of their annual breast and cervical cancer screenings. WISEWOMAN will be offered to women who are screened at federally qualified community health centers in Chesterfield, Clarendon, Darlington, Dillon, Florence, Georgetown, Horry, Kershaw, Lee, Marion, Marlboro, Sumter and Williamsburg counties.

Project SCOPE implemented to address colorectal cancer

In 2006, colorectal cancer (CRC) was the fourth most commonly diagnosed cancer and the second leading cause of cancer deaths in South Carolina. Men are more likely to be diagnosed with CRC than women, and African-Americans are more likely to be diagnosed than whites. African-American men are the most likely to be diagnosed and die from this disease. South Carolina ranks 20th in the nation for colorectal cancer mortality. The overall mortality rate for colorectal cancer in South Carolina is slightly more than the U.S. average.

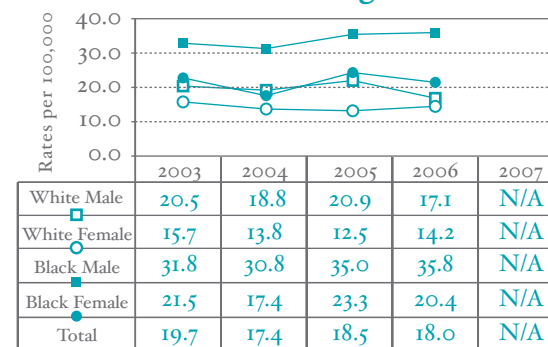
South Carolina is far behind the Healthy People 2010 overall goal of mortality from CRC. The Healthy People 2010 goal is an overall age-adjusted rate of 13.7 (2005 S.C. = 18.4, U.S. = 17.4). In 2006, African-American men in South Carolina had an age-adjusted mortality rate of 35.8 and white men 17.1.

To address colorectal cancer, with funding awarded through the S.C. General Assembly, DHEC developed and is now implementing the SCOPE SC program (Screening Colonoscopies for Everyone in South Carolina). The program was designed through collaboration between DHEC and other partners including the S.C. Cancer Alliance, the University of South Carolina's Center for Colorectal Cancer Research, and the S.C. Primary Health Care Association. Screening began in state fiscal year 2008-09. Current funding, appropriated through the General Assembly, totals \$800,000 and is available only for one year.

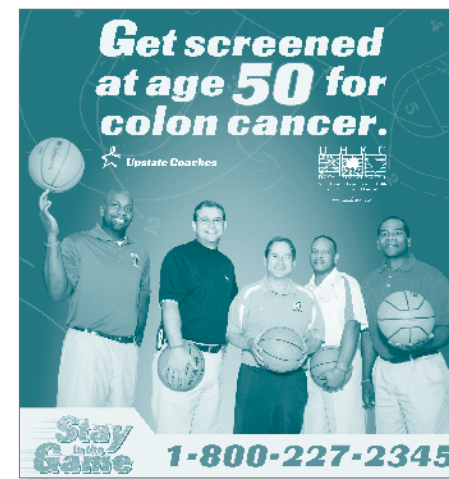
To date, 220 clients have been screened. A total of 310 prior authorizations have been assigned. Two colon cancer cases have been detected and referred for treatment. DHEC has applied for federal funding from the national Centers for Disease Control and Prevention to expand the program in future years.

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Colorectal Cancer Death Rates* All Ages



Data Source: S.C. DHEC PHSIS-SCCCR
Cause of death classification based on ICD-10
*Age-adjusted to the 2000 U.S. standard population
2007 data not available



Improving the health of our children

Children are our most precious resource. They are the leaders of tomorrow. What happens to children early in life, and even before they are born, has long-term impact on their well-being as adults and for society as a whole.

DHEC is taking action to address several important public health issues affecting young children, including infant mortality, family planning, perinatal regionalization, nutrition, oral health and immunizations.

Infant mortality

Infant mortality is defined as a death occurring during the first year of life. The infant mortality rate is an important health outcome measure. It is often used as a measure of the overall health status of a given population. It reflects the health status of mothers and children, and is also indicative of underlying socioeconomic and racial disparities. In 2007, the South Carolina infant mortality rate was 8.5 deaths per 1,000 live births. Racial and ethnic disparities related to infant mortality remain persistent. The 2007 infant mortality rate among black populations of 13.8 deaths per 1,000 live births is 2.3 times greater than the white infant mortality rate of 6.0 deaths per 1,000 live births.

In 2007, birth defects were the second-leading cause of infant death for all races combined. Premature births were the leading cause of infant death among all races, and the leading cause of infant death among black infants. Sudden Infant Death

Syndrome (SIDS), maternal complications of pregnancy, and accidents constitute the remaining leading causes of infant death.

S.C. Infant Mortality Rates by Race



Data Source: S.C. DHEC Biostatistics



S.C. Birth Defects program

Birth defects are defined as an abnormality of structure, function or metabolism present at birth that results in physical or mental disabilities or death. According to 2007 S.C. Vital Records data, birth defects represent the second-leading cause of infant death. Data and information gained from birth defects surveillance systems have played a critical role in the development of effective strategies to prevent birth defects. Having a strong statewide surveillance system is critical to assuring the health and well-being of South Carolina's infants and children.

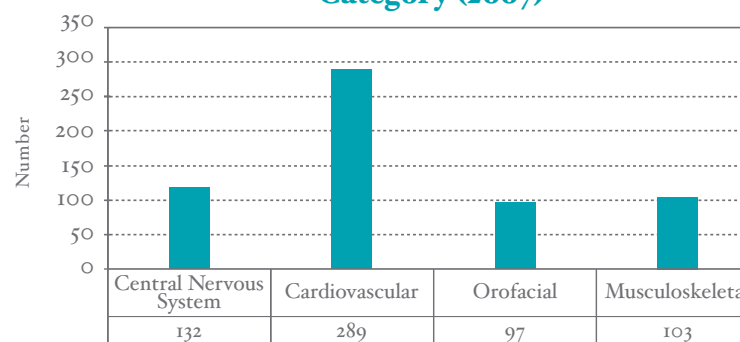
In May 2004, the S.C. General Assembly passed the Birth Defects Act. In fiscal year 2006, DHEC received funding to establish the S.C. Birth Defects Program (SCBDP). The Birth Defects Act mandates that the SCBDP monitor all major birth defects identified prenatally through age 2 for the purposes of:

- Determining rates and trends of birth defects
- Promoting effective referral of infants and families for appropriate services and care
- Developing public health strategies for the prevention of birth defects
- Conducting research on the causes, distribution and prevention of birth defects

The SCBDP has developed and implemented a system of active case identification of major structural birth defects occurring in South Carolina. A Web-based electronic surveillance system enables trained nurse abstractors to review hospital medical records supplemented by information from other health databases. As surveillance data becomes increasingly available, the SCBDP will continue to work closely with other public health entities, university-based researchers and advocacy groups to coordinate activities and assure provisions outlined in the Birth Defects Act are implemented.



S.C. Number of Birth Defects by Major Category (2007)



Data Source: S.C. Birth Defects Program Surveillance Data

Family planning

The health status of the mother before pregnancy and having a pregnancy that is wanted and well timed is essential to assuring optimal health and well-being for women, infants and families. Pregnancies that are unwanted or mistimed are referred to as “unintended.” Women with an unintended pregnancy are often in poor health status before pregnancy, or engage in behaviors detrimental for both mother and baby. In South Carolina, 44.7 percent of pregnancies in 2007 were considered unintended, representing an 11 percent drop from 2006 (50.2 percent). Certain subpopulations are at greater risk of having an unintended pregnancy. These subpopulations include teens, minority women, and women from lower socioeconomic backgrounds. Unintended pregnancies can have a tremendous financial and social impact. Nationally, it is estimated that half of unintended pregnancies end in abortion.

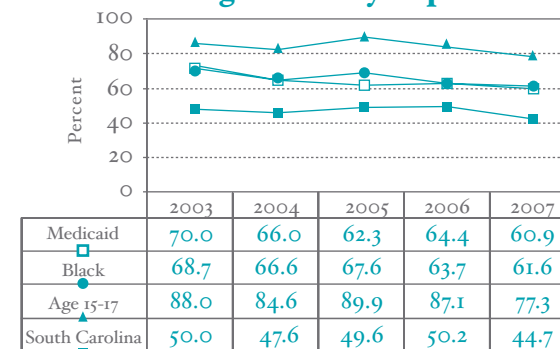
The United States has set a national goal of decreasing unintended pregnancies to 30 percent by 2010. This can primarily be done through family planning. Services provided in family planning clinics are designed to improve the health and well-being of the mother before becoming pregnant, assure pregnancies are wanted and well-timed, and ultimately improve birth outcomes. Family planning is a cost effective service providing health education and personal reproductive health care services to women and families in South Carolina. It is estimated every \$1 spent of family planning services saves more than \$4 in expenditures.

DHEC provides family planning services in more than 65 clinic sites throughout the state. In 2008, 96,831 women and men received family planning services from DHEC. Fifty-three percent were minority women and men. In general, family planning clients come from lower socioeconomic backgrounds with 97 percent of clients falling below 185 percent of the federal poverty level.

Perinatal regionalization

The primary objective of perinatal regionalization is to reduce the number of neonatal deaths by assuring access to regionalized neonatal intensive care units for the smallest and sickest babies. The number of very low birthweight babies (VLBW) delivered in level III hospitals (or designated perinatal centers) often measures success of the perinatal regionalization programs. The Healthy People 2010 goal of VLBW babies born in level III hospitals is 90 percent.

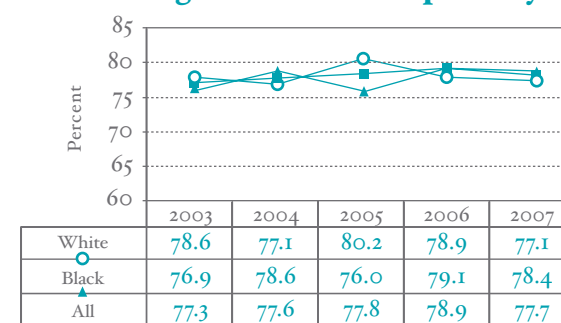
S.C. Percent Unintended Pregnancies by Population



Data Source: S.C. DHEC PRAMS



S.C. Percent of VLBW Deliveries Occuring in Level III Hospitals by Race



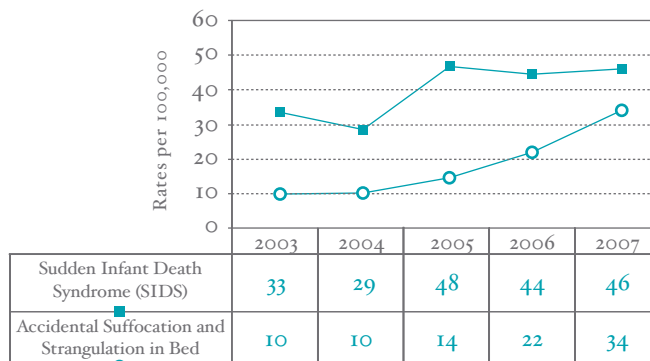
Data Source: S.C. DHEC Biostatistics

“ABCs” of Safe Sleep Guidelines: Alone, on the Back, in a Crib

Sudden Infant Death Syndrome (SIDS) is the leading cause of death for post-neonatal infants during their first year of life. Accidental suffocation and strangulation in bed is the leading cause of accidental death in infants. DHEC supports the American Academy of Pediatrics’ Back to Sleep program with the “ABCs” of Safe Sleep Guidelines: Alone, On the Back, in a Crib. Brochures, videos, and posters have been distributed to hospitals, public health departments, health care providers, community organizations and other government agencies.

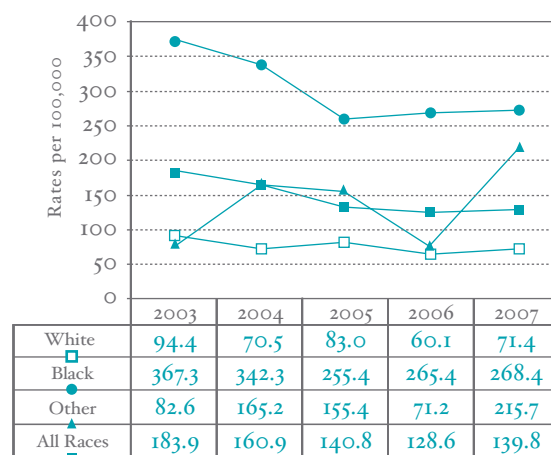
Additionally, in an effort to reduce infant deaths attributable to SIDS and unsafe sleeping environments, a March of Dimes grant has been used to develop training materials for providers to use in one-on-one settings with new mothers and caregivers. DHEC’s Safe Sleep training tool has been produced in both English and Spanish, with distribution targeted to postpartum newborn home visit nurses, Cribs for Kids, the S.C. Department of Disabilities and Special Needs, and other community organizations and government agencies working directly with caregivers of infants.

**S.C. Frequency of Sleep-Related
Infant Deaths by Cause of Death**



Data Source: S.C. DHEC Biostatistics

**S.C. Infant Mortality Rates
Attributable to Prematurity by Race**



Data Source: S.C. DHEC Biostatistics

Prematurity prevention

DHEC is working with the March of Dimes in support of their five-year campaign to look at causes and solutions to preterm birth. DHEC has focused educational materials, such as brochures and posters, on the consequences of early induction of labor, signs of preterm labor, maternal health, and the importance of planned pregnancies. Mothers who begin prenatal care early and continue care throughout pregnancy reduce the risk of complications during childbirth, infant illness and infant deaths. DHEC programs stress early entry into care, including WIC, and the importance of a medical home.

In 2007, prematurity was the leading cause of death for South Carolina’s infants of all races. The magnitude of this disparity has served as a catalyst for the establishment of the African-American Steering Committee, a collaborative effort among DHEC, March of Dimes, and other community partners. The committee seeks to develop programs, policies, and advocacy efforts at both the local and state level that will decrease the rate of infant mortality and preterm birth among African-Americans.

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Women, Infants and Children program launches healthier food package

The Special Supplemental Nutrition Program for Women, Infants and Children, known as WIC, assists in providing food security and addresses the special needs of at risk, low-income pregnant, breastfeeding and postpartum women, as well as infants and children up to 5 years of age. Infants and children who participate in the WIC program are also screened to assure that their immunizations are up-to-date.

In 2008, the state's WIC program served a total of 163,539 clients including, 57,796 infants, 84,992 children and 20,751 pregnant women.

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Less tooth decay in S.C. children

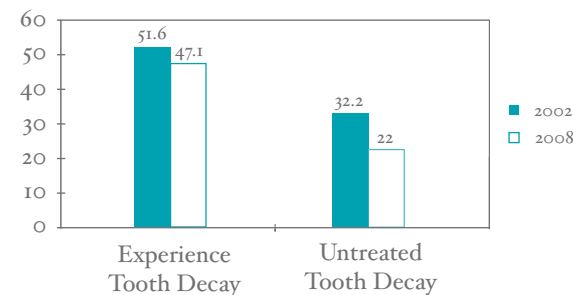
Tooth decay is a chronic disease that affects people of all ages. In adults, tooth decay has been associated with an increased risk for future tooth problems, heart disease and diabetes. When tooth decay occurs in children, the disease can affect their development and their quality of life. Untreated decay can lead to poor nutrition, speaking problems, trouble with sleeping, and academic problems.

In 2000, DHEC reestablished its oral health program. Since that time a comprehensive oral health plan has been developed, federal funding secured, and various partnerships and collaborations have been strengthened. This comprehensive approach to addressing oral health appears to be working. DHEC recently completed its second Oral Health Needs Assessment (OHNA) of kindergarten and third grade South Carolina students during the 2007-08 school year. Of the 5,734 children screened, 47.1 percent (2,700) have experienced tooth decay. This is approximately a five percent decrease in the number of South Carolina children younger than eight who experienced tooth decay in 2002. Similarly, the percentage of children with untreated tooth decay has declined since the last needs assessment. The 2008 OHNA found that 22 percent of the children experienced untreated tooth decay as compared to 32 percent in 2002.

Although South Carolina has experienced improvement in children's oral health status, the burden of oral disease disproportionately affects some children more than others. Black children who were participating in free and reduced lunch programs, and living in rural communities were most likely to have untreated tooth decay.



Percentage of Tooth Decay in Kindergarten and Third Grade South Carolina Students



Data Source: 2008 S.C. Oral Health Needs Assessment

Dental sealant use on the rise

Dental sealants are thin plastic coatings that are applied to the grooves on the chewing surfaces of the back teeth where most tooth decay occurs in children and teens. Sealants protect the chewing surfaces by keeping germs and food particles out of these grooves. From 2002 to 2008, the percentage of third grade children in South Carolina with dental sealants increased from 20 percent to 24 percent. Even with the increase in sealant use, there is still much more work to be done to reach the Healthy People 2010 goal of having 50 percent of third grade children with dental sealants.

School-based dental sealant programs deliver preventive services including dental sealants to school-aged children throughout South Carolina who might otherwise not have access to preventive dental care. During the 2007-08 school year, the DHEC school-based sealant program served more than 23,000 children in 412 schools throughout the state.

Immunization of preschool children challenging

Over the years, DHEC has transitioned much of its direct childhood immunization efforts to the private sector by establishing and encouraging medical homes for children. DHEC's primary role now is to work with private providers to make sure that children are getting timely

and complete immunization coverage. Children can still get their shots at the local public health department if they can't get them in the private sector. New vaccines continue to be added to a busy childhood and adolescent immunization schedule. Tracking children who have fallen behind on their immunizations is a significant challenge throughout the 579 immunization practices across the state. According to the CDC's 2007 National Immunization Survey, South Carolina's estimated immunization coverage of children 19-35 months is 79.6, the 14th best in the country. The Healthy People 2010 goal for the nation is 90 percent coverage. Reaching this goal is a challenge in the face of an increasingly complex schedule of immunizations.

<http://www.dhec.sc.gov/health/disease/immunization/survey.htm>



Adolescent immunizations need a boost

The adolescent population presents many challenges with regard to vaccinations. Teens may have infrequent contact with medical services because of the belief that, from a disease standpoint, adolescence is the healthiest period of one's life. Often, major risks to health during adolescence are primarily behavioral. Even when ill, many adolescents will fail to access care due to limited financial resources or inadequate transportation, resulting in lack of routine preventive care that provides the opportunity for vaccination in younger age groups.

DHEC has put considerable effort into the creation and distribution of fliers, targeting parents of children and teens in grades 6-12. Collaboration with the S.C. Department of Education and the S.C. Cancer Alliance yielded an informational flier listing all four recommended adolescent vaccines (protection against meningitis, human papilloma virus for females, as well as chickenpox and pertussis boosters).

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Reducing the threat and burden of infectious diseases

Infectious diseases such as the flu, tuberculosis, HIV/AIDS and other sexually transmitted diseases continue to be a public health problem in South Carolina. DHEC has a significant role in tracking and monitoring the spread of these diseases and works with community partners to provide effective prevention and treatment services to reduce the burden in our state.

Disease outbreak investigations remain a priority

In 2008, DHEC responded to 106 outbreaks, affecting more than 3,000 individuals. The more common disease outbreaks of norovirus, chicken pox, pertussis, salmonella, and influenza, reinforced the need for routine surveillance and response activities. Unique responses to waterborne giardia, legionella and an environmental exposure via a mercury-vapor lamp at a middle school, required close coordination between numerous areas of DHEC and external partners at both the local, state and federal levels.

Health Alert Network

DHEC uses the statewide Health Alert Network (HAN) to keep health care providers updated throughout events of public health significance. The HAN connects DHEC's central disease control program in Columbia to the state's eight public health regions, and more than 3,200 health care providers. Health advisories are issued through the HAN and a similar program called REACH SC by phone, e-mail, fax and pager. The HAN is used when there is information about a disease threat or health problem that hospitals and doctors need right away. In 2008, 14 health advisories and six health updates were sent to health care providers across the state.

Hospital-based Chief-Complaint Syndromic Surveillance

In 2008, five additional health care facilities joined the S.C. Aberration Alerting Network (SCAAN) system, bringing the total number of participating hospitals to 10 within the state.

Hospitals enrolled in the SCAAN system provide daily data feeds of emergency room chief-complaint data. This effort allows DHEC and our hospital-reporting partners to identify possible disease outbreaks early and initiate a timely response.

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Overall burden of HIV/AIDS

For 2007, South Carolina ranks eighth for new AIDS cases from all states and the District of Columbia. In 2006 and 2007, 1,568 people were diagnosed with HIV in South Carolina. Compared to the 2000-2001 period, there was a 16 percent decrease in cases diagnosed and reported in South Carolina. As of December 2007, 14,696 people have been reported living with HIV infection (including AIDS) who are residents of South Carolina. Of these, 10,144 are men and 4,552 are women. Most people (9,851) are ages 25 - 49; 179 are children and teenagers 13-19 years.

Health disparities

More than seven out of every 10 newly diagnosed HIV infections occur among African-Americans, though they only represent a third of South Carolina's population. The number of people living with HIV/AIDS in South Carolina has increased dramatically in the past 10 years for all races and both genders. The rate of people living with HIV/AIDS per 100,000 was almost six times higher for African-American males than for white males, and close to 12 times higher for African-American females than white females. (See table.)

These disproportionate rates together with South Carolina's high rates of other sexually transmitted diseases, high rates of poverty, and high proportion of non-urban dwellers combine for a major public health challenge for our African-American communities. To address this public health challenge, DHEC continued to focus on community planning, providing HIV prevention and treatment services, and expanding its HIV testing program.

S.C. New HIV/AIDS Case Rates by Race/Gender

	1996-1998	1999-2001	2002-2004	2005-2007
White Male	16.7	10.2	9.1	9.2
White Female	4.1	2.8	2.6	2.5
Black Male	99.3	81.5	65.7	59.7
Black Female	47.6	41.3	35.1	26.4
Total	29.7	23.9	20.6	18.2

Rates per 100,000 population

Data Source: S.C. DHEC HIV/AIDS Reporting System

S.C. Rates of Persons Living with HIV/AIDS by Race/Gender

	2003	2004	2005	2006	2007
White Male	175.9	178.5	181.2	178.0	193.0
White Female	38.0	38.9	40.3	42.6	44.0
Black Male	953.6	992.2	1007.9	1032.6	1061.2
Black Female	454.7	480.1	489.2	503.8	513.5
Total	298.5	306.4	311.6	320.8	329.6

Rates per 100,000 population

Data Source: S.C. DHEC HIV/AIDS Reporting System



AIDS Drug Assistance Program (ADAP)

Improved drug regimens continue to increase the lifespan of people living with HIV/AIDS. As of December 2008, DHEC's ADAP was serving more than 2,000 patients per month. With the recurring funding from the S.C. General Assembly to the program, there was no need to institute a waiting list for services in 2008.

HIV counseling, testing and referral services increased

DHEC also provides HIV testing in its public health departments and through its community partners to reach those infected with HIV so they can be referred into medical care and treatment. In 2008, DHEC and its community partners tested more than 54,000 people, an increase of more than 5 percent compared to 2007.

As part of DHEC's comprehensive STD/HIV prevention program, Partner Services is essential for ensuring that sex and needle-sharing partners of STD/HIV-infected persons are confidentially notified about their risk, and offered STD/HIV prevention counseling, testing and referrals. In 2008, DHEC provided these important services to more than 1,400 individuals.

In 2008, DHEC's local public health departments and community partners reached more than 2,500 persons with HIV prevention health education and risk reduction programs. These programs target those most at risk for becoming infected or infecting someone else with HIV.

Expanded HIV testing

South Carolina is among 26 states and cities that have been awarded the Expanded Testing Initiative grant from the CDC. The goal of the grant is to identify the approximately 21 percent of HIV positive persons that don't know they are infected. In 2009, the number of hospitals in South Carolina participating in the program increased from three to five. The goal for 2009 is to test an additional 35,000 people in South Carolina.

<http://www.scdhec.gov/health/disease/stdhiv/>

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Tuberculosis

Tuberculosis is a public health disease that requires continuous monitoring, surveillance, and specific interventions to control. Ultimate eradication is possible. TB is a bacterial disease primarily found in the lungs, although extrapulmonary disease can occur. Transmission is usually by inhalation of airborne droplets from a person with active pulmonary disease.

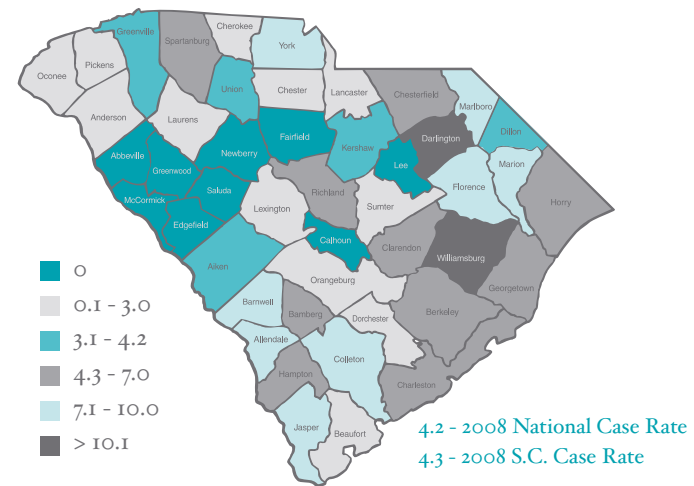
In 2008, South Carolina reported a total of 188 cases which ranks South Carolina 11th nationally in TB incidence with a case rate of 4.3 per 100,000 individuals in the population. The Healthy People 2010 goal is set at 1.0 new case per 100,000 population. The 188 cases reported in 2008 represent a decrease of 14 percent compared to the 218 cases reported in 2007 and a 40 percent decrease from 1999.

About 51 percent of the TB cases were reported in six counties. Twenty of 46 counties in South Carolina meet or exceed the national case rate average of 4.2 cases per 100,000.

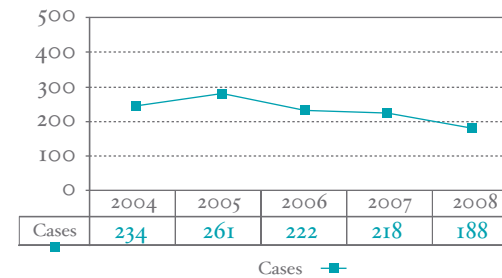
Fifty-four percent of all TB cases occurred among African-Americans. While this is still high, it represents a 24 percent decline from 2005. Fifty-nine percent of cases occurred in the 25-44 age group, although the 45-64 age group follows closely with 52 percent.

S.C. Tuberculosis Case Rates* by County in 2008

* Cases per 100,000 population

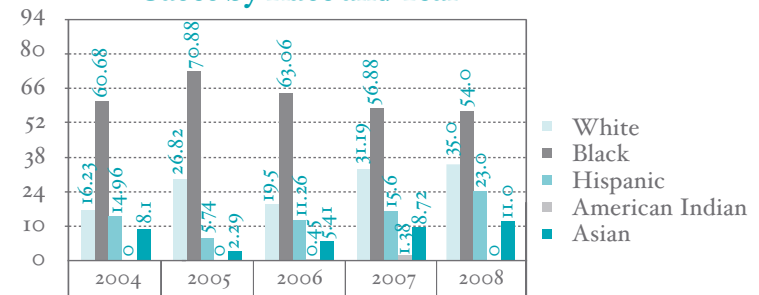


Number of S.C. Tuberculosis Cases by Year



Data Source: S.C. DHEC Tuberculosis Information Management System

Percentage of TB Cases by Race and Year



Data Source: S.C. DHEC Tuberculosis Information Management System

Drug-resistant TB continues

Drug-resistant tuberculosis continues to be a problem nationally and in South Carolina, 15 cases involving drug resistance occurred in 2008 compared to 11 cases in 2006. These cases require extensive case management by public health nurses and 18-24 months for completion of an adequate course of treatment. Sustaining an expert team of public health professionals experienced in TB case management remains a challenge in the face of a shrinking public health workforce

The TB program assures an adequate course of treatment for active tuberculosis disease is achieved through the use of directly observed therapy (DOT). DOT requires that a health care worker or other person in authority directly observe the patient take each dose of medication. South Carolina had a 94 percent treatment completion rate in 2007, which is greater than the Healthy People 2010 goal of 90 percent.

DHEC provides diagnostic, treatment and prevention services. Examinations are available in each of the agency's county public health departments, and are provided by licensed health care professionals.

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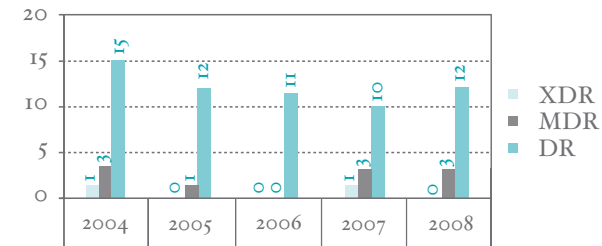
Health disparities seen in flu, pneumonia vaccination rates

South Carolina's pneumonia and influenza vaccination rates in 2007 for both non-Hispanic whites and non-Hispanic African-Americans over age 65 are below the national average. The immunization rates for African-Americans remain lower than whites. Rates differ by approximately 20 percentage points and seem to vary slightly year to year.

Individuals who do not have access to health services, including flu and pneumonia shots, include a disproportionate number of



Number of Cases with Drug-resistant (DR), Multi-drug resistant (MDR) and Extensively-drug resistant (XDR) TB by Year



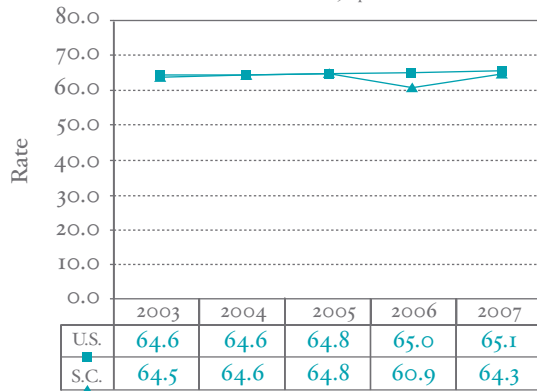
Data Source: S.C. DHEC Tuberculosis Information Management System

minorities, especially those who are not fluent in English. Raising flu vaccination rates among minorities will require shattering some myths, including the myth that the vaccine causes flu, increasing physician/patient encounters where influenza and pneumococcal vaccinations opportunities are not missed, and enhancing access to flu shots particularly in underserved and low income communities.

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A Comparison of S.C. and U.S. Pneumococcal Immunization Rates for Persons Over 65

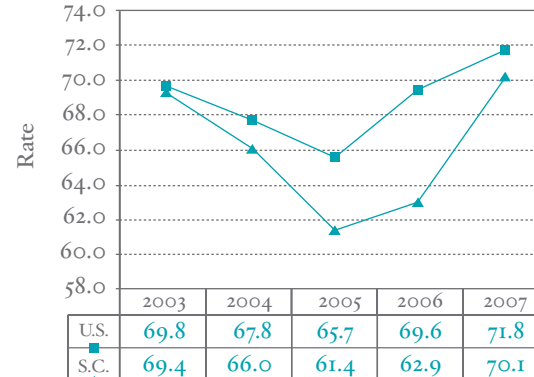
HP 2010 Goal 90 percent



Data Source: S.C. BRFSS

A Comparison of S.C. and U.S. Influenza Immunization Rates for Persons Over 65

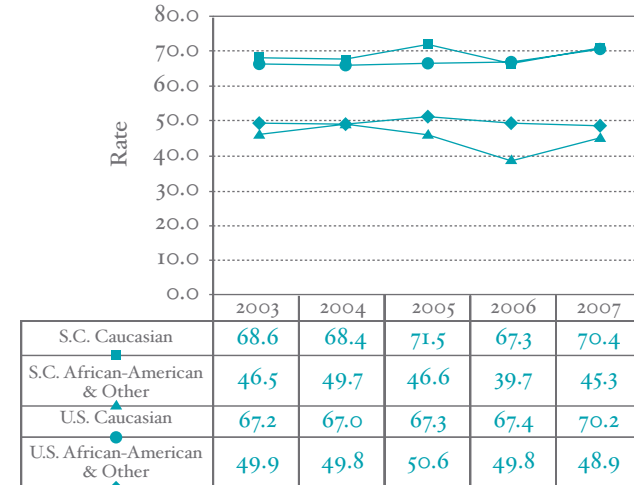
HP 2010 Goal 90 percent



Data Source: S.C. BRFSS

A Comparison of S.C. and U.S. Pneumococcal Immunization Rates by Race for Persons Over 65

HP 2010 Goal 90 percent



Data Source: S.C. BRFSS

Influenza, pneumonia take toll on seniors

Influenza and pneumonia are the 10th leading cause of death in South Carolina, claiming 728 residents in 2007. Influenza epidemics cause an average 36,000 deaths and more than 200,000 hospitalizations in the U.S. every year. The best way to reduce the effect of influenza is getting a flu shot every year.

Pneumonia, a bacterial infection in the lungs, is a common complication of the flu. A pneumococcal vaccine is recommended for people 65 and older. Most people need only one pneumococcal vaccine in a lifetime. Medicare Part B pays for both the flu and pneumococcal vaccines. During the 2008-2009 Influenza Season, DHEC successfully secured a CDC grant to enhance its “What You Can Do to Prevent the Flu” campaign. The expanded campaign included:

- Pilot school-based initiative in select middle schools to increase vaccination of students
- Prominent South Carolina college football coaches encouraged vaccination in public service announcements



The image is a full-page background photograph. On the left side, a large, ancient-looking tree with thick, gnarled branches and dense green foliage dominates the foreground. Long, thin strands of Spanish moss hang from its branches, reaching down towards the water. The tree's reflection is visible in the calm water below. To the right of the tree, a wide body of water, possibly a bayou or a large pond, stretches across the middle ground. The water has a slight ripple and reflects the sky. In the far distance, a thin line of trees and vegetation marks the horizon. The sky above is a pale blue, filled with soft, white, scattered clouds. The overall mood is peaceful and natural.

Chapter 3: Environment

Protect, enhance and sustain environmental and coastal resources

It is the day-to-day services delivered by DHEC that help maintain the quality of South Carolina's environment and protect the health of the public. Reducing the impact our daily lives have on the environment and the state's coastal ecosystem is one of the many ways DHEC strives to fulfill its vision of healthy people living in healthy communities. Protecting these valuable resources ensures future generations will be able to safely live, work and relax in South Carolina.

DHEC establishes mercury reduction strategy

In 2008, DHEC initiated a mercury reduction strategy to reduce risk from mercury exposure. It is the agency's way of helping the public, interested groups, industry and government work together to reduce mercury exposure.

Mercury exists naturally in the environment. However, human activities have increased mercury exposure potential since America's industrial period (1830-1915). The greatest human mercury contributions have come from combustion of fossil fuel and waste. South Carolina is affected by mercury emissions from local, regional and global sources.

The risk to humans is mainly through two pathways. The most common pathway is consumption of mercury-contaminated fish in amounts greater than recommended. Mercury risk from fish is not a hazard if individuals follow DHEC consumption advisories. Every year, DHEC issues advisories on the amounts and types of fish to eat from state waters. In 2008, DHEC expanded awareness by placing advisory signs at 277 public boat landings, in addition to public communication through booklets, brochures, the DHEC Web site, and radio public service announcements.

Another pathway for human exposure is through broken or improperly disposed mercury-containing products. Examples include such common items as thermometers, fluorescent lamps, vehicle switches and thermostats. The potential for risk can be reduced by the replacement of mercury-containing products with mercury-free alternatives where feasible, and recycling of the mercury product. Since 2002, approximately 33 pounds of mercury from about 8,000 vehicle switches and 1,500 thermostats in South Carolina have been recycled, rather than disposed into the environment. DHEC continues to encourage further development of recycling programs for mercury-containing products.

DHEC seeks to reduce mercury emissions as another means of risk reduction. An important first step occurred in December 2008 when DHEC signed an agreement with South Carolina utilities including SCANA, Duke Energy Carolinas, Progress Energy Carolinas and Santee Cooper. The utilities voluntarily committed to providing mercury testing and monitoring to track emissions from each coal-fired power plant unit, starting in the summer of 2009.



They will also participate in a study of mercury deposition from mercury sources both within and outside the state.

DHEC continues to support collaborative mercury risk reduction actions incorporating ongoing stakeholder input, changing environmental conditions, and study results.

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DHEC focuses on public participation

In 2007-2008, DHEC's Public Participation Task Force conducted statewide listening sessions to answer questions pertaining to the agency's authority, processes, public meetings, public notices, and information accessibility.

More than 5,000 comments were summarized into 12 priorities. From the priorities, the task force identified notification and education as the top concerns. Two subcommittees were formed to recommend action steps: the Early, Consistent, and Effective Notification subcommittee, tasked with improving various notification processes, and the Public Education and Interaction subcommittee, tasked with improving interaction and public information and education.

<http://www.scdhec.gov/environment/publicparticipation>

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Reducing particulate matter, meeting air quality standards

In 2001, DHEC identified several areas across the state (Greenville, Aiken, Lexington and Richland counties) where the PM_{2.5} (particulate matter 2.5 microns or smaller) concentrations were increasing and were approaching the National Ambient Air Quality Standard for PM_{2.5}. These fine particles are more easily inhaled by humans and have the potential to cause adverse health effects. In response, DHEC conducted outreach activities in the affected counties. Staff met with local stakeholder groups such as industry, government, recreation and school officials to develop and implement strategies to reduce PM_{2.5} concentrations. At the end of 2008, statewide and regional trends indicated a significant decrease in PM_{2.5} concentrations. As of June 2009, particulate monitors across the state indicated that air quality in South Carolina met the PM_{2.5} standards.

DHEC collaborates with local groups to continue these efforts through a "multi-pollutant" approach, which includes ozone, greenhouse gases, particulate matter and air toxics. Assisting in

the development of open burning ordinances, offering lawn mower exchanges and initiating "Breathe Better" idle-reduction programs are some of the best practices generated by these collaborations. These have resulted in enhanced awareness of air quality issues, the implementation of various air quality initiatives, and reduced air pollution.

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Meeting ozone standards

Historically, South Carolina has very good air quality when compared to the U.S. Environmental Protection Agency's health-based National Ambient Air Quality Standards. When the more restrictive 1997 ozone standard of 0.08 ppm was implemented in 2004, however, our state had two areas – the Upstate (Greenville, Spartanburg and Anderson counties) and the Central Midlands (parts of Lexington and Richland counties) – that had monitor readings above 0.08 ppm. These areas received a "deferred" nonattainment designation from the EPA because of their participation in the Early Action Compact (EAC) program.

All but one of South Carolina's counties participated in the EAC program because they were committed to improving the air quality in their communities. Local and regional governments, industry, and environmental groups partnered with DHEC to implement measures that would reduce the air pollution that contributes to ozone concentrations. As a result of this collaboration, the Upstate and Central Midlands areas met the standard earlier than would have been otherwise required and were re-designated as attainment in April 2008.

The EAC program initiated collaboration and partnerships that continue to this day. These partnerships have evolved to include a "multi-pollutant" approach, whereby efforts to reduce other pollutants, such as particulate matter, greenhouse gases, and air toxics, are implemented. These have resulted in enhanced awareness of air quality issues and local air quality initiatives.

The following table shows design values* for all ground-level ozone monitors in the State for which data are available. The EPA replaced the 1997 standard of 0.08 (rounded to 0.084) parts per million (ppm) with a more stringent standard of 0.075 ppm

in 2008. Even as the state's overall air quality is improving, EPA continues to evaluate and lower standards for pollutants, thereby making it more challenging to meet the new standards.

*A design value is a calculation that describes the air quality of a given area relative to the EPA's health-based limits, or standards. Design values are based on multiple years of ambient air data to ensure a stable indicator of an area's air quality. Design values are used to classify nonattainment areas, assess progress toward meeting the standards, and to develop control strategies.

Ground-Level Ozone Design Values* at Ozone Monitoring Sites in South Carolina

County	Monitoring Site Location	Subject to 1997 EPA Standard		Subject to 2008 EPA Standard
		2006 Design Value	2007 Design Value	2008 Design Value
Abbeville	Due West	0.079	0.081	0.078
Aiken	Jackson	0.077	0.077	0.076
Berkeley	Bushy Park	0.069	0.066	0.064
Charleston	Cape Romain	0.075	0.075	0.072
Cherokee	Cowpens	0.074	0.074	0.074
Chesterfield	Chesterfield	0.075	0.075	0.073
Colleton	Ashton	0.074	0.074	0.072
Darlington	Pee Dee	0.077	0.076	0.075
Edgefield	Trenton	0.070	0.071	0.070
Oconee	Long Creek	0.072	0.071	0.070
Pickens	Clemson	0.079	0.081	0.080
Richland	Congaree Bluff	0.072	0.073	0.071
Richland	Parklane	0.082	0.080	0.078
Richland	Sandhill	0.082	0.083	0.079
Spartanburg	N. Spartan. FD	0.083	0.083	0.084
York	York	0.070	0.079	0.077

1997 EPA Standard: 0.084 ppm

2008 EPA Standard: 0.075 ppm

Design Values exceeding the 2008 Standard are written in italics.

Data Source: EPA Air Quality System database, accessed on July 28, 2009.

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Increasing efficiency, reducing costs within lab certification

The South Carolina Environmental Laboratory Certification program plays a critical behind-the-scenes role in environmental protection in our state. The purpose of the Laboratory Certification program is to provide the mechanism to assure the validity and quality of environmental data. It is an essential part of DHEC's self-monitoring program. The data generated by environmental laboratories is used to determine whether permittees, such as municipalities and industries, are complying with state environmental regulations.

South Carolina regulation requires the formal certification of all laboratories reporting data to DHEC for regulatory compliance. It is important for the regulated community to know that DHEC's regulatory decisions are based on scientifically valid and legally defensible data.

With dwindling resources, DHEC has sought ways to make this program more efficient. For many years, it has administered the EPA's Discharge Monitoring Report-Quality Assurance (DMR-QA) Study. In 2009, DHEC requested an exemption from the EPA study for the South Carolina National Pollutant Discharge Elimination System (NPDES) permittees. The DMR-QA Study covers major and selected minor permit holders under the Clean Water Act's NPDES program. The study requires the analysis and reporting of proficiency testing samples for the laboratories that perform the chemical, microbiological, and toxicity testing analyses required by the NPDES permits.

With state coordinator approval, the EPA allowed permittees that use state-certified

labs to be exempted from the DMR-QA Study. To reduce labor and cost, DHEC requested an exemption from the EPA for all of the NPDES permittees in South Carolina. In May 2009, DHEC received official notification from the EPA granting an exemption from the NPDES DMR-QA program, based on DHEC's proficiency testing program requirements.

The elimination of the DMR-QA study requirement will reduce duplication in government operations. It will increase efficiency in DHEC's Laboratory Certification program, while reducing the workload for the NPDES permittees and the laboratories performing the analyses.

DHEC has also improved efficiency and accountability by automating application review processes. Some new processes involve the renewal procedures for in-state and out-of-state laboratories certified by the program. The renewal applications and their documentation are now being tracked by DHEC's Environmental Facility Information System. The evaluation reports and correspondence are generated and stored in the system for later retrieval or review. The automation of this renewal process has also improved staff productivity.

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Helping businesses recycle, reduce waste

The South Carolina Smart Business Recycling Program offers free and confidential technical assistance to businesses. A partnership between DHEC and the S.C. Department of Commerce, its purpose is to help businesses reduce waste and potentially generate revenue through the sale of recovered material and avoided disposal costs.

Services include:

- site visits to assess reuse waste reduction and recycling opportunities
- research and contacts for markets and service providers
- best management practices and other publications
- a recognition program
- workshops

In addition, the program offers the South Carolina Materials Exchange, a free on-line service that lists material available or wanted. More than 200 businesses were assisted this past fiscal year, and a statewide workshop was held.

<http://www.scdhec.gov/scme>

<http://www.scdhec.gov/smartbusiness>

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S.C. Coastal Information Network a valuable tool

Coastal resource preservation and development requires thoughtful planning and execution, particularly among communities and municipalities. A critical component to these efforts is access to high quality information and training opportunities for decision makers. To maximize the efficient delivery of these services, DHEC has partnered with leading state and regional academic and outreach institutions to create the South Carolina Coastal Information Network. The Coastal Information Network provides an online clearinghouse of educational material, events and points of contact to promote the knowledge base available to assist coastal decision-makers and stakeholders.

<http://www.sccoastalinfo.org>

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Reduce risks with better home medicine disposal

Unwanted medicine disposed of improperly might be a risk to human health and the environment. Traditionally, people have disposed of expired or unwanted medicine through home plumbing. Until recently, it was considered best to flush medicine down the toilet or pour it down the drain to be treated in the local water system. But across the nation, traces of many medicines are being found at low concentrations in lakes and rivers. Some traces have even been found in fish.



Given these recent findings, DHEC has developed a medicine disposal fact sheet for households. It offers specific tips for properly disposing of unwanted medicine in the household trash. It also discourages flushing and pouring as a method of medication disposal.

Medicines delivered at home by injection also raise concerns. The needles, syringes and lancets are known as "sharps." They must be disposed of properly. This ensures that other people, especially sanitation workers, will not be stuck or cut. DHEC's "Get the Point" program promotes a safe and easy way to dispose of sharps. "Get the Point" encourages people to place sharps in an empty bleach or detergent bottle labeled with a warning sticker. Once the bottle is about three-fourths full, the cap should be secured and the bottle disposed of in the household trash. Labels are available free from DHEC.

<http://www.scdhec.gov/getthepoint>

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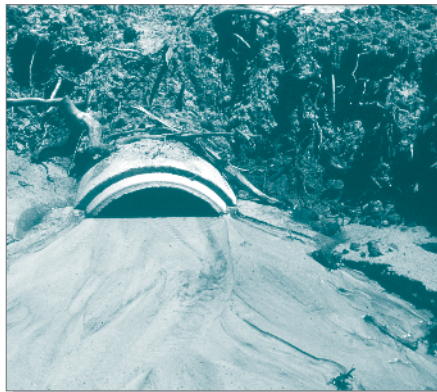
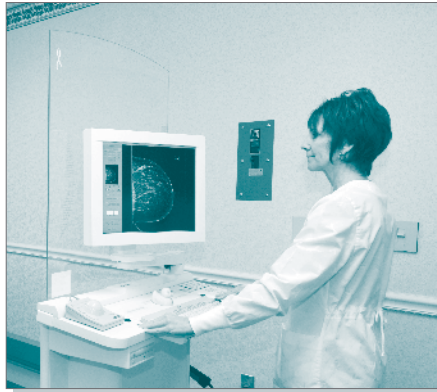
X-ray and radiation protection and shielding

Since radiation cannot be seen, tasted or smelled, it is critical to ensure that effective radiation protection practices are followed. An important element of that regulatory oversight is a review of the facility's operating procedures, radiation protection program and shielding design. DHEC has regulatory responsibility for approximately 3,600 X-ray facilities in S.C.

Radiation exposure can be minimized by applying the fundamental rules of radiation protection which are time, distance and shielding. Using this principal, DHEC evaluates X-ray room designs to maintain radiation levels within accepted limits for the general public, and radiation workers.

Shielding plans include components related to room layout, the occupancy of any surrounding areas, and projections of the required lead or lead-equivalent material needed to minimize radiation. This shielding is intended to protect occupants of adjacent rooms and the operator, who is required to remain behind a protective barrier. These plans are required for most X-ray installations including, but not limited to, hospitals, doctor's offices, veterinary offices, chiropractors, and specialized equipment in dental offices. These plans must be prepared and evaluated by qualified individuals registered to provide this service in South Carolina.

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DHEC, local utilities partner to notify public of sewer system overflows

DHEC has long had a process for sewer utilities to report sewer system overflows. That information was entered into a tracking system, but was not quickly available to the public.

To better inform the public who might be affected by a sewer system overflow, DHEC developed a new notification process in partnership with local sewer utilities.

Since local utilities are typically the first to know of an overflow, DHEC asked that they develop and implement a public notification process. In 2008, DHEC requested permitted dischargers to develop a public notification program for overflows that exceed 5,000 gallons or have the potential to have a public health impact. DHEC staff provided a template to guide the utilities in developing their program, as well as a question-and-answer sheet to give more information.

The local utility itself decides how to notify the public. Methods include local newspaper, television, or radio announcements, and posting on-site signs. Most major municipal utilities have developed a program for notifying the public when significant sewer overflows occur. For smaller utilities with few staff to handle timely notifications, DHEC has assisted them in releasing the information.

This program has proven to be very effective in improving the timeliness of these highly important notifications. It has also helped ensure that local citizens can take action to protect themselves, their workplaces and their families.

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Program aims to decrease marine debris

The next time you visit the beach, take a moment to consider that each year more than 50 tons of plastic, fishing gear and other litter is collected from our beaches and coastal waterways. Litter not only looks terrible, it also poses a serious, and sometimes deadly, threat to turtles, birds and other marine animals. They can mistakenly ingest the litter as food. Debris can trap or entangle animals. Clearly, marine debris is a grave threat to the health and beauty of our coast, but it is preventable. In 2009, DHEC continued its successful partnership with other state and regional agencies to produce *The Educator's Guide to Marine Debris, Southeast and Gulf of Mexico*. This educational product is designed to engage middle school students on marine debris issues through curriculum and hands-on activities.

Through this and other targeted efforts, DHEC and its partners are working to decrease the amount of marine debris in our coastal environment and help ensure the health and beauty of our coast for future generations of turtles, birds and humans.

http://www.scdhec.gov/environment/ocrm/outreach/marine_debris.htm

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DHEC's environmental justice program receives EPA award

In 2007, the South Carolina Environmental Justice Advisory Committee defined environmental justice as “the fair treatment and meaningful involvement of people of all races, cultures and income with respect to the development, adoption, implementation and enforcement of environmental laws, regulations and policies in working towards increasing prosperity of all South Carolinians.”

In October 2008, DHEC received a 2008 Environmental Justice Achievement Award from the U.S. Environmental Protection Agency during ceremonies in Atlanta. The award was presented for “outstanding work implementing South Carolina environmental justice law.” DHEC was one of 12 national award recipients to receive the first-time awards.

The award recognized five years of DHEC's environmental justice work, which was developed on several fronts. These included the creation of a governmental advisory committee, the work of the public participation task force, use of environmental justice listening sessions, and collaborative problem-solving. DHEC staff strives to involve citizens early in these activities, which help to address concerns within environmental justice communities.

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Regional Public Health Offices

Region 1

(Abbeville, Anderson, Edgefield, Greenwood, Laurens, McCormick, Oconee, Saluda)

220 McGee Road
Anderson, SC 29625
(864) 260-5541
FAX (864) 260-5676

1736 S. Main Street
Greenwood, SC 29648
(864) 942-3600
FAX (864) 942-3690

Region 2

(Cherokee, Greenville, Pickens, Spartanburg, Union)

200 University Ridge
Greenville, SC 29602
(864) 282-4138
FAX (864) 282-4372

151 E. Wood Street
Spartanburg, SC 29305
(864) 596-3333
FAX (864) 596-3443

Region 3

(Chester, Fairfield, Lancaster, Lexington, Newberry, Richland, York)

1833 Pageland Highway
PO Box 817
Lancaster, SC 29721
(803) 286-9948
FAX (803) 286-5418

2000 Hampton Street
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FAX (864) 241-1092

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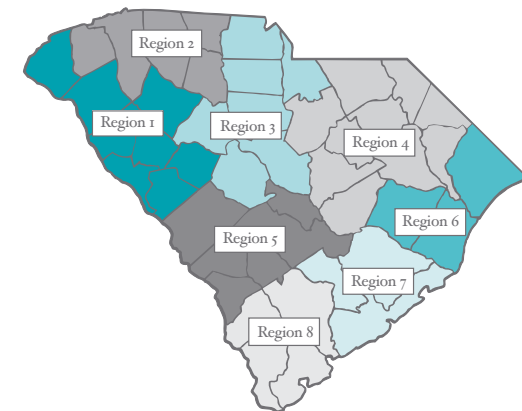
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